Group4 Labs launches world's first 2-inch GaN-on-Diamond wafer

Group4 Labs LLC, located in Menlo Park, USA, has introduced the world's first 2-inch GaN-on-diamond semiconductor wafer.The new 2-inch version of the recently introduced 10 x 10 mm GaN is the second product in the company's Xero Wafer family.

Commenting on the wafer, Group4 Labs' CEO, Felix Ejeckam, said:"It's specially targeted to makers of power amplifiers (for cellular base stations), microwave and millimeter-wave circuits,

UV laser diodes and ultra-bright blue/green/white LEDs who want tremendous power and thermal performance at little or no additional cost, compared to currently available semiconductor solutions."

Sharing the same breakthrough technology, the larger GaN-on-diamond wafer also features a single GaN layer (2 inches in diameter) atomically attached to a synthetic diamond substrate (also 2 inches in diameter).This permits unprecedented high-temperature resilience for very high-power, high-frequency electronic, solid-state white lighting, military and photonics applications. The 2-inch wafer is ideal for use in the conventional epitaxial growth of GaN and its aluminum- and indium-based alloys.

The company's technology enables the GaN layer to be atomically attached to a free-standing, proprietary, polycrystalline chemical vapour deposited (CVD) diamond substrate (25 microns thick). The GaN exposed is an atomically smooth surface finish that is epi-ready for further epitaxial deposition.The device is commercially available as a freestanding 2-inch wafer or optionally on a disposable, silicon substrate to permit easy handling during wafer processing.

The wafers are currently available at a price of $5,000-$7,000 per unit, depending on quantity.

For more details, visit:
www.Group4Labs.com

Plaudits and $8m credit facility for SemiSouth

Participants at the recent Semiconductor Venture Fair V named SemiSouth Laboratories as one of the top five most promising emerging companies.The Mississippi, USA based SemiSouth develops and manufactures SiC materials and devices.

"This recognition is a true honor and comes as the company embarks on a new capital funding campaign in anticipation of future growth," said Dr. Jeffrey B. Casady, SemiSouth's president and co-founder."The next round of financing we secure will enable us to leverage our silicon carbide technology and our new, nearly completed silicon carbide manufacturing clean room, to seek a larger presence in the overall power electronics market."

Shortly after, SemiSouth announced it had closed an $8m credit facility with Ritchie Technology and Life Science Finance, a division of Ritchie Capital Finance, to fund receivable growth and to finance forward capital equipment requirements.

"We're extremely pleased to have secured this financing, which will help position the company for future growth," said Casady."We are equally impressed with Ritchie Technology and Life Science Finance's depth of understanding of our business and our corporate finance needs.This credit facility will provide us supplemental working capital and flexibility as we implement various strategic initiatives."

"Silicon carbide's ability to reduce heat emission within computing and vehicle environments and enable future design applications with positive operating and environmental impact in both commercial and military applications, we view as very compelling," said Gail Fitzpatrick, Managing Director, Technology & Life Sciences Finance Division for Ritchie Capital Finance, LLC."We see SemiSouth as an emerging leader in this technology and are pleased to have been selected as their lender."

For more details, visit:
www.SemiSouth.com